UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,373	10/29/2001	Hiroshi Sasaki	01697/LH	1645

1933 7590 04/11/2005

FRISHAUF, HOLTZ, GOODMAN & CHICK, PC
767 THIRD AVENUE
25TH FLOOR
NEW YORK, NY 10017-2023

EXAMINER	
FINEMAN, LEE A	
ART UNIT	**PAPER NUMBER**
2872	

DATE MAILED: 04/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/006,373	SASAKI ET AL.	
	Examiner	Art Unit	
	Lee Fineman	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 February 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to an amendment filed 3 February 2005. Claims 11-27 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 12-13, 15-16, 18 and 20-21, 23-24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoeppe et al., U.S. Patent No. 6,167,173, in view of Goix, International Patent Publication No. WO 98/57152.

Schoeppe et al. disclose a laser microscope (fig. 1), which irradiates a sample (5) with a laser light (13.2) including lines of different emission wavelengths (column 3, lines 15-22) through an objective lens (4), and detecting a fluorescent light from the sample (column 3, lines 49-57), said laser microscope comprising a monitoring section (19-21); including a monitoring diode (19) and a controller (36, 34) configured to receive an output signal of the diode and controlling said laser light for each of said emission wavelengths (column 4, lines 1-7) and wherein said controller receives the output signal of said diode and controls respective light intensities of the lines of different of emission wavelengths of said laser light to be constant; an optical fiber (14.2) for guiding said laser light into a laser microscope main body wherein said monitoring section (19-21) including a monitoring diode (19) are disposed on a light emission

side of said optical fiber (fig. 1); an acousto-optical element (AOTF within 13.2), disposed on an optical path of said laser light, configured to receive said control signal outputted from said control unit and setting the respective light intensities of the lines of different emission wavelengths included said laser light to be constant; and a beam splitter (18) configured to split a part of said laser light and guiding the part into said monitoring section. Schoeppe et al. disclose the claimed invention except for wherein the monitoring section is a spectral resolution section configured to spectrally resolve said laser light into the lines of different emission wavelengths; a light receiving element array that includes a plurality of light receiving elements configured to simultaneously receive the lines of different emission wavelengths such that each emission wavelength of said spectrally-resolved laser light is respectively received by one of said light receiving elements; and wherein said spectral resolution section is any one selected from a group including of a prism, a diffraction grating, and a beam splitter. Goix teaches a laser microscope system (fig. 3C) with a monitoring system that includes a spectral resolution section (313), which is a diffraction grating, configured to spectrally resolve light into the lines of different emission wavelengths (page 7, lines 24-27); and a light receiving element array (315) that includes a plurality of light receiving elements (it has multiple detectors or light receiving elements, see page 7, line 23) configured to simultaneously receive the lines of different emission wavelengths such that each emission wavelength of said spectrally-resolved light is respectively received by one of said light receiving elements (page 7, lines 24-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the monitoring diode of Schoeppe et al. with that of Goix to provide faster, accurate detection of many different wavelengths with no moving parts.

3. Claims 14, 17, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoeppe et al. in view of Goix, as applied to claims 12 and 21 above, and further in view of Lee, U.S. Patent No. 4,449,821.

Schoeppe et al. in view of Goix, as applied to claims 12 and 21 above disclose the claimed invention except for explicitly stating wherein said light receiving element array comprises either one of a split photodiode and a solid-state image sensing device; and wherein said controller is configured to receive the output signal of said light receiving element array and simultaneously control setting the respective light intensities of the lines of different emission wavelengths included in said laser light to be constant. Lee teaches a system (fig. 1) with a light receiving element array (6) which includes a split photodiode detector and a control system (2) which is configured to receive the output signal of said light receiving element array and simultaneously control setting the respective light intensities of the lines of different emission wavelengths included in said laser light to be constant (column 4, line 43-column 5, line 45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace light receiving element array and controller of Schoeppe et al. in view of Goix with that of Lee to provide faster corrections of light variation in the system.

4. Claims 10, 11, 19 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schoeppe et al. in view of Goix, as applied to claims 12 and 21 above, and further in view of Eastman et al., U.S. Patent No. 5,684,582.

Schoeppe et al. in view of Goix, as applied to claims 12 and 21 above further disclose a collimator lens (16, Schoeppe) configured to collimate said laser light guided by the optical fiber. Schoeppe et al. in view of Goix, as applied to claims 12 and 21 above disclose the claimed invention except for a converging lens disposed between said spectral resolution section and said light receiving element array and configured to converge the lines of different emission wavelengths. Eastman et al. teaches spectral resolution unit (fig. 1) including a prism (column 4, lines 6-7) and a converging lens (66). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the converging lens of Eastman et al. to the system of Schoeppe et al. in view of Goix to prevent stray light or to be able to image the light. Further, regarding claim 11, the monitoring section of Schoeppe et al. in view of Goix, which includes the collimator lens, the beam splitter, the spectral resolution section, the light receiving element array, and the converging lens from Eastman et al. are formed into one block (within the scanning unit of the microscope), and the block is constituted to be attachable/detachable with respect to a main body (M) of the laser microscope.

Response to Arguments

5. Applicant's arguments, see page 6, lines 7-19, filed 3 February 2005, with respect to the rejection(s) of claim(s) 12 under 35 U.S.C. 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Engelhardt, U.S. Patent No. 5,886,784, Carlson et al., U.S. Patent No. 6,038,023 and Ballard, U.S. Patent No. 5,793,049 all disclose systems with light receiving element array configured to simultaneously receive lines of different emission wavelengths.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LAF
April 5, 2005

MARK A. ROBINSON
PRIMARY EXAMINER